

Abstract

Intermittent Application of Syngas to NOx Trap

A catalytic partial oxidizer (30) provides syngas (hydrogen and carbon monoxide) to an apparatus intermittently using syngas such as valves (34) feeding NOx traps (35), for brief periods of time.

5 During turndown times when syngas is not being used, either the output of the CPO is diverted (33) to the inlet (13) of an engine (12) through the engine gas recycle (EGR) system (43-46), or the amount of fuel (19) and exhaust (23) applied to the CPO is reduced (24, 26; 59, 60) so that the CPO merely stays warm and in a reduced state,

10 thereby being ready to restart immediately. A mini-CPO (62) may provide syngas and heat to the major CPO (30) during the turndown time when syngas is not being used by the NOx traps.